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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Missile Defense Agency										Date: February 2018		
Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)					PE 0604887C I Ballistic Missile Defense Midcourse Defense Segment Test							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	133.082	61.350	76.757	81.934	-	81.934	95.458	82.956	78.715	85.362	Continuing	Continuing
MT08: Midcourse Test	130.284	58.319	73.453	78.311	-	78.311	92.111	79.214	74.784	81.444	Continuing	Continuing
MD40: Program Wide Support	2.798	3.031	3.304	3.623	-	3.623	3.347	3.742	3.931	3.918	Continuing	Continuing
Program MDAP/MAIS Code: 362												

Note

Increase from FY 2018 to FY 2019 reflects Integrated Master Test Plan changes to include a new concept of Ground Testing (Continuous Development, Continuous Integration and Continuous Agile Testing (CIT/CAT)) which requires additional requirements of Test Planning, Test Integration, Test Execution and Analysis. Test activities that were previously performed sequentially will now be performed in parallel to reduce the test cycle time, with periods of 3 lab based activities simultaneously. These new sequential test flows will require additional test teams, off shift work to de-conflict assets and network infrastructure, and additional data packages and test reviews. Changes also include additional requirements of Test Planning, Test Integration, Test Execution and Analysis for new Cyber Security testing events. Using a new developmental crawl, walk, run Cyber test approach for each future GS build will require earlier and additional installation and checkout (2 to 3 early engineering releases and Pre-Formal Qualification releases) of the GS family of products in the labs to support earlier learning, feedback to the product development team, and final evaluation of cyber capability prior to operational cyber testing. Increased number of Target of Opportunity test events based on measured data due to the additional activity of real world events. In preparation for FTG-11 and CTV-03 additional test range telemetry and data collection upgrades are planned for Vandenberg Air Force Base, Pacific Missile Range Facility, and Point Mugu.

A. Mission Description and Budget Item Justification

Ballistic Missile Defense Midcourse Defense Segment Test provides flight and ground testing of Ground-based Midcourse Defense (GMD) functionality to demonstrate Enhanced Homeland Defense capabilities against long-range threats. The GMD components are tested in an integrated environment with Ballistic Missile Defense System (BMDS) sensors; Command & Control, Battle Management, Communications (C2BMC); Warfighters; and national collection assets to assess the ability to defend the United States and its territories against ballistic missile attack.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Missile Defense Agency	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604887C I <i>Ballistic Missile Defense Midcourse Defense Segment Test</i>
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	56.481	76.757	74.205	-	74.205
Current President's Budget	61.350	76.757	81.934	-	81.934
Total Adjustments	4.869	0.000	7.729	-	7.729
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	6.300	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	-1.431	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• FY 2017 Request for Additional Appropriations	0.000	0.000	0.000	-	0.000
• Missile Defeat and Defense Enhancement	0.000	0.000	0.000	-	0.000
• Other Adjustment	0.000	0.000	7.729	-	7.729

Change Summary Explanation

Increase from PB 2018 to PB 2019 in FY 2019 reflects Integrated Master Test Plan changes to include a new concept of Ground Testing (Continuous Development, Continuous Integration and Continuous Agile Testing (CIT/CAT)) which requires additional requirements of Test Planning, Test Integration, Test Execution and Analysis. Test activities that were previously performed sequentially will now be performed in parallel to reduce the test cycle time, with periods of 3 lab based activities simultaneously. These new sequential test flows will require additional test teams, off shift work to de-conflict assets and network infrastructure, and additional data packages and test reviews. Changes also include additional requirements of Test Planning, Test Integration, Test Execution and Analysis for new Cyber Security testing events. Using a new developmental crawl, walk, run Cyber test approach for each future GS build will require earlier and additional installation and checkout (2 to 3 early engineering releases and Pre-Formal Qualification releases) of the GS family of products in the labs to support earlier learning, feedback to the product development team, and final evaluation of cyber capability prior to operational cyber testing. Increased number of Target of Opportunity test events based on measured data due to the additional activity of real world events. In preparation for FTG-11 and CTV-03 additional test range telemetry and data collection upgrades are planned for Vandenberg Air Force Base, Pacific Missile Range Facility, and Point Mugu.

PB19 reflects approved out year Missile Defeat and Defense Enhancement (MDDE) tails.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Missile Defense Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604887C / Ballistic Missile Defense Midcourse Defense Segment Test				Project (Number/Name) MT08 / Midcourse Test			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
MT08: Midcourse Test	130.284	58.319	73.453	78.311	-	78.311	92.111	79.214	74.784	81.444	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note N/A												
A. Mission Description and Budget Item Justification Ballistic Missile Defense Midcourse Defense Segment Test provides flight and ground testing of GMD functionality to demonstrate Enhanced Homeland Defense capabilities against long-range threats. The GMD components are tested in an integrated environment with BMDS sensors; C2BMC; Warfighters; and national collection assets to assess the ability to defend the United States and its territories against ballistic missile attack.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2017	FY 2018	FY 2019	
Title: Resources Articles: Description: Provides support associated with day-to-day operations of the flight and ground test programs to include engineering support for ground test planning, execution, and post-event reconstruction. Recurring work: provides test infrastructure and coordination of flight test range support from Vandenberg Air Force Base (VAFB), California, for all range activities, engineering, operators and GBI transportation; provides command and control and situational awareness for the GMD flight and ground test events at the MDA Integration and Operations Center (MDIOC) in Colorado Springs, Colorado and the Readiness and Control Facility (R&C) in Ft. Greely, Alaska; provides test communication plans, test communication control, satellite communication bandwidth, test network certification and accreditation for GMD flight and ground tests to integrate the range in Vandenberg Air Force Base, California, MDIOC in Colorado Springs, Colorado, Ft. Greely, Alaska and Pacific Missile Range Facility (PMRF) in Hawaii; provides engineering, operations and maintenance of the integrated system test labs in Huntsville, Alabama, to conduct BMDS flight test pre-mission risk reduction and system level ground testing for fielding warfighter capabilities that defend the homeland; provides operations and maintenance and equipment upgrades of the Prime Consolidated Integration Lab (PCIL) in Huntsville, Alabama to support flight test pre-mission risk reduction and post-flight reconstruction to provide confidence in models and simulations used for evaluation of performance of GMD homeland defense capabilities; and provides equipment upgrades at VAFB and the MDIOC to test support systems. Specific and/or unique accomplishments to each FY are as follows: FY 2018 Plans:									14.516	18.250	24.398	
									-	-	-	

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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604887C / Ballistic Missile Defense Midcourse Defense Segment Test	Project (Number/Name) MT08 / Midcourse Test		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2017	FY 2018	FY 2019
See above for recurring efforts.				
FY 2019 Plans: See above for recurring efforts. -Support and execute a new BMDS test process and capability called Continuous Integration/Continuous Agile Testing(CI/CAT) to conduct system level integrated ground testing allowing more find and fix opportunities, and increased flexibility to meet agency additional Hard-Ware-In-the-Loop (HWIL) events -Support and execute Cyber Security Testing per DOT&E requirement for Cooperative Vulnerability and Penetration Assessment (CV PA) and Adversarial Assessment (AA) to support operational acceptance for BMDS weapon system fielding -Support and execute Target of Opportunity (TOO) testing at various locations per DOT&E requirement for data collection on TOO test events to support evaluation of performance of GMD homeland defense capabilities				
FY 2018 to FY 2019 Increase/Decrease Statement: Increase from FY 2018 to FY 2019 reflects Integrated Master Test Plan changes to include a new concept of Ground Testing (Continuous Development, Continuous Integration and Continuous Agile Testing (CIT/CAT)) which requires additional requirements of Test Planning, Test Integration, Test Execution and Analysis. Test activities that were previously performed sequentially will now be performed in parallel to reduce the test cycle time, with periods of 3 lab based activities simultaneously. These new sequential test flows will require additional test teams, off shift work to de-conflict assets and network infrastructure, and additional data packages and test reviews. Changes also include additional requirements of Test Planning, Test Integration, Test Execution and Analysis for new Cyber Security testing events. Using a new developmental crawl, walk, run Cyber test approach for each future GS build will require earlier and additional installation and checkout (2 to 3 early engineering releases and Pre-Formal Qualification releases) of the GS family of products in the labs to support earlier learning, feedback to the product development team, and final evaluation of cyber capability prior to operational cyber testing. Increased number of Target of Opportunity test events based on measured data due to the additional activity of real world events. In preparation for FTG-11 and CTV-03 additional test range telemetry and data collection upgrades are planned for Vandenberg Air Force Base, Pacific Missile Range Facility, and Point Mugu.				
Title: Flight Test Execution		29.661	37.606	36.847
Articles:		-	-	-
Description: Flight tests demonstrate the capabilities and/or phenomenology that cannot be adequately tested or obtained during ground testing. Flight tests also provide opportunities to test actual hardware and to demonstrate Ballistic Missile Defense System (BMDS) Element interoperability under operationally realistic conditions. Specific and/or unique accomplishments to each FY are as follows:				
FY 2018 Plans:				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2017	FY 2018	FY 2019
<p>Increase from FY 2017 to FY 2018 is due to the execution of FTG-11 and initial planning for CTV-03.</p> <p>-Conduct Flight Test Ground-based Midcourse Defense-11 (FTG-11), a 3-stage CE-II Block I and 3-stage CE-II Salvo intercept using GBIs launched from Vandenberg Air Force Base, California, against an ICBM target with associated objects, launched from Reagan Test Site (RTS) to test operational realism of the GMD salvo capability. Salvo intercept test requires additional resources from previous missions to support multiple interceptors: additional range support for mission execution and safety systems, silo refurbishment of two silos, additional data collectors, and additional post mission analyses</p> <p>-Initiate planning of range and data collection assets for Flight Test Ground-based Midcourse Defense-Controlled Test Vehicle-03 (GM CTV-03), a non-intercept mission with Redesigned Kill Vehicle (RKV) to collect RKV flight environment data using a GBI launched from Vandenberg Air Force Base, California</p> <p>FY 2019 Plans:</p> <p>-Conduct Flight Test Ground-based Midcourse Defense-11 (FTG-11), a 3-stage CE-II Block I and 3-stage CE-II Salvo intercept using GBIs launched from Vandenberg Air Force Base, California, against an ICBM target with associated objects, launched from Reagan Test Site (RTS) to test operational realism of the GMD salvo capability. Salvo intercept test requires additional resources from previous missions to support multiple interceptors: additional range support for mission execution and safety systems, silo refurbishment of two silos, additional data collectors, and additional post mission analyses</p> <p>-Initiate planning of range and data collection assets for Flight Test Ground-based Midcourse Defense-Controlled Test Vehicle-03 (GM CTV-03), a non-intercept mission with Redesigned Kill Vehicle (RKV) to collect RKV flight environment data using a GBI launched from Vandenberg Air Force Base, California</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement:</p> <p>N/A</p>				
<p>Title: Ground Test Execution</p> <p>Articles:</p> <p>Description: Ground tests demonstrate and validate Warfighter tactics, techniques, and procedures. Ground tests are executed both in the Hardware-in-the-loop (HWIL) lab and in the field. HWIL lab tests integrate and assess Ballistic Missile Defense System (BMDS) system- level performance based on new element capabilities. Ground tests in the field use existing fielded element assets and tactical communication networks, to integrate, assess and demonstrate the element capabilities.</p> <p>FY 2018 Plans:</p> <p>-Support execution of GT-07b Early Integration to assess BMDS capabilities and the mission functionality of the GMD GS version 7B BMDS capabilities for Robust Homeland Defense performance</p>		4.862 -	4.550 -	7.196 -

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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604887C / Ballistic Missile Defense Midcourse Defense Segment Test	Project (Number/Name) MT08 / Midcourse Test		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2017	FY 2018	FY 2019
<p>-Support execution of GTI-07b and continue to support planning and integration of GTD-07b Part 2 to assess BMDS capabilities and the mission functionality of the GMD GS version 7B BMDS capabilities for Future Sensor Utilization and GS Technology Refresh</p> <p>FY 2019 Plans:</p> <p>-Support execution of GTI-07b and GTD-07b Part 2 to assess BMDS capabilities and the mission functionality of the GMD GS version 7A BMDS capabilities for Future Sensor Utilization and GS Technology Refresh</p> <p>-Support planning and integration of Warfighter TP 07b, 14-day Trial Period following the GTD-07b, to allow the new software to soak on the operational system ensuring that there are no degrading effects or anomalies that were not identified in previous testing.</p> <p>-Support planning, integration and execution of GTI-07c (NORTHCOM/PACOM) (N/P) and early planning of GTD-07c (N/P) to support fielding of the GMD Increment 6B capability.</p> <p>-Support planning of GTI-08 to assess BMDS-level interoperability with maturing Element capabilities, asset allocations, and geographical content (C2BMC S8.2-5, BOA 7.1, AN/TPY-2 (FBM) CX 4.0.0, GS 8, and THAAD 4.0.0)</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement:</p> <p>Increase from FY 2018 to FY 2019 reflects execution of the GT-07 Ground Test Campaign and addition of GTI-07c ground test to collect the data required for fielding GS-7b including the GCN Modernization.</p>				
<p>Title: Program Operations</p> <p align="right">Articles:</p> <p>Description: Program Operations provides for government management of the Ground-based Midcourse Defense (GMD) Test program. This effort includes program and business management support activities, financial management, cost and schedule performance analyses, cost estimation and analyses, configuration management, and integration. It also includes activities to provide critical program status and decision quality data and GMD test program compliance with internal and external direction, policies, and regulations to deliver critical capability within a consistent and disciplined process and technical and testing oversight, quality/safety/mission assurance, integrated logistics support, and government manpower and infrastructure to test the GMD system and components.</p> <p>Specific and/or unique accomplishments to each FY are as follows:</p> <p>FY 2018 Plans:</p> <p>- SEE ABOVE.</p> <p>FY 2019 Plans:</p>		9.280 -	13.047 -	9.870 -

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2017	FY 2018	FY 2019
- SEE ABOVE.												
FY 2018 to FY 2019 Increase/Decrease Statement: Decrease from FY 2018 to FY 2019 reflects return to sufficient levels of staffing after re-baselining change in acquisition strategy.												
Accomplishments/Planned Programs Subtotals										58.319	73.453	78.311
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost	
• 0203882C: MD08: GMD O&M	129.281	137.896	143.027	-	143.027	139.319	142.269	145.188	0.000	Continuing	Continuing	
• 0603882C: Ballistic Missile Defense Midcourse Defense Segment	1,034.861	957.097	926.359	-	926.359	1,046.235	847.537	585.956	572.619	Continuing	Continuing	
• 0603914C: Ballistic Missile Defense Test	294.441	316.193	365.681	-	365.681	349.388	320.909	320.332	327.584	Continuing	Continuing	
• 0603915C: Ballistic Missile Defense Targets	521.784	460.125	517.852	-	517.852	441.827	383.739	405.909	417.800	Continuing	Continuing	
• 0604874C: Improved Homeland Defense (HLD) Interceptors	247.362	636.430	561.220	-	561.220	485.755	502.023	604.309	635.719	Continuing	Continuing	
Remarks												
D. Acquisition Strategy												
The GMD program will continue to follow testing, development, and evolutionary acquisition through incremental development. The Agency acquisition strategy ensures that the GMD components are upgraded to improve both system performance and interceptor reliability in order to retain the proven GMD contribution to the BMDS. This acquisition approach minimizes the risk of parts availability, provides opportunities for incremental capability improvements, and allows decision makers to make informed trades between cost, schedule, and performance while exploring improved operational and technological capabilities.												
GMD awarded a competitive Development and Sustainment Contract (DSC) on December 30, 2011. This contract continues development, fielding, test, systems engineering, integration, and configuration management; equipment manufacturing and upgrade; training, operations and sustainment of the GMD system and associated support facilities. The DSC emphasizes the application of performance-based tenets to provide timely high quality support of the core GMD system while reducing life cycle and long-term ownership costs. GMD's acquisition strategy for transition of the legacy content into the DSC provides uninterrupted field operations; development of both Ground Systems and Interceptor (GBI) products, including manufacturing additional interceptors to support both operations and testing; and the requirement to demonstrate war fighting capability through a rigorous ground and flight test program.												

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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense Midcourse Defense Segment Test</i>	Project (Number/Name) MT08 / <i>Midcourse Test</i>
<p>In January of 2018 the MDA Director signed an Acquisition Strategy Decision Memorandum (ASDM) changing the acquisition strategy to execute the Missile Defeat and Defense Enhancement scope. The Development and Sustainment Contract (DSC) will continue with the Boeing Company to Q1 FY2024 to build the 20 GBI's and 20 Silo's with supporting test, engineering, software, and performance based logistics scope. This additional capability will provide 64 interceptors by the end of calendar year 2023 as well as maintain operation and support capabilities and support upcoming ground and flight tests. The Justification and Approval for this action was signed by the MDA Director on 2 January 2018.</p> <p>E. Performance Metrics N/A</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Missile Defense Agency												Date: February 2018			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense Midcourse Defense Segment Test</i>						Project (Number/Name) MT08 / <i>Midcourse Test</i>			
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Operations - Contract Support Services	C/CPFF	Various AL/AK/ : CA/ CO/VA	0.000	5.000	Oct 2016	6.942	Oct 2017	4.536	Oct 2018	-		4.536	Continuing	Continuing	Continuing
Program Operations - Government Civilian Salaries	MIPR	MDA AL/ : VA	0.000	4.280	Oct 2016	6.105	Oct 2017	5.334	Oct 2018	-		5.334	Continuing	Continuing	Continuing
Program Operations - Range, Resources, and Engineering	C/CPAF	Various : AL/AK/CA/ CO/VA	0.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Subtotal			0.000	9.280		13.047		9.870		-		9.870	Continuing	Continuing	N/A
Remarks N/A															
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Resources - Cyber Security - Simulation Center	MIPR	Space and Missile Systems Center (SMDC) : AL	0.009	0.000		0.000		0.000		-		0.000	0.000	0.009	0.000
Resources - Cyber Security - Advanced Research Center Cyber Support	C/IDIQ	COLSA Corp : AL	4.162	0.000		0.000		0.000		-		0.000	0.000	4.162	0.000
Resources - Cyber Security - NSITE/GT Communications	MIPR	Aviation & Missile Research & Development : AL	0.138	0.000		0.000		0.000		-		0.000	0.000	0.138	0.000
Resources - Cyber Win10 Implementation - MDDC Lab Analysis Infrastructure	C/IDIQ	Analytical Services, In. : AI	1.449	0.000		0.000		0.000		-		0.000	0.000	1.449	0.000
Resources - Engineering & Analysis - Industry Support	C/CPAF	Boeing : AL	4.221	0.000		0.000		0.000		-		0.000	0.000	4.221	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Missile Defense Agency												Date: February 2018			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604887C / Ballistic Missile Defense Midcourse Defense Segment Test				Project (Number/Name) MT08 / Midcourse Test					
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Resources - Engineering & Analysis - OGA Support	MIPR	AMRDEC : AL	4.098	0.000		0.000		0.000		-		0.000	0.000	4.098	0.000
Resources - Government Infrastructure Support, Labs, and Communications	MIPR	VAFB : CA/AL/CO	11.495	6.408	Nov 2016	9.901	Nov 2017	17.568	Nov 2018	-		17.568	Continuing	Continuing	Continuing
Resources - Prime Infrastructure Support, Labs, and Communications	C/CPAF	Boeing : AL/AK/AZ/CA/CO/OR/TX/VA	13.831	8.108	Nov 2016	8.349	Nov 2017	6.830	Nov 2018	-		6.830	Continuing	Continuing	Continuing
Flight Test Execution - Planning and Silo Refurbishment	C/CPAF	Boeing : AL/AK/AZ/CA/CO/OR/TX/VA	50.459	18.965	Nov 2016	8.180	Nov 2017	13.254	Nov 2018	-		13.254	Continuing	Continuing	Continuing
Flight Test Execution - Range, Resources, and Engineering	MIPR	VAFB/PMRF : CA/HI	28.110	10.696	Nov 2016	29.426	Nov 2017	23.593	Nov 2018	-		23.593	Continuing	Continuing	Continuing
Ground Test Execution - Ground Test-04 Campaign	C/CPAF	Boeing : AL/AK/AZ/CA/CO/TX/VA	3.355	0.000		0.000		0.000		-		0.000	0.000	3.355	0.000
Ground Test Execution - Ground Test-06 Campaign	C/CPAF	Boeing : AL/AK/AZ/CA/CO/TX/VA	8.163	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Ground Test Execution - Ground Test-07 Campaign	C/CPAF	Boeing : AL/AK/AZ/CA/CO/TX/VA	0.794	4.862	Nov 2016	4.459	Nov 2017	7.196	Nov 2018	-		7.196	Continuing	Continuing	Continuing
Ground Test Execution - Ground Test-08 Campaign	C/CPAF	Boeing : AL/AK/AZ/CA/CO/TX/VA	0.000	0.000		0.091	Nov 2017	0.000		-		0.000	Continuing	Continuing	Continuing
Subtotal			130.284	49.039		60.406		68.441		-		68.441	Continuing	Continuing	N/A
Remarks N/A															
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			130.284	58.319		73.453		78.311		-		78.311	Continuing	Continuing	N/A

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Appropriation/Budget Activity 0400 / 4				R-1 Program Element (Number/Name) PE 0604887C / Ballistic Missile Defense Midcourse Defense Segment Test		Project (Number/Name) MT08 / Midcourse Test			
	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Remarks N/A									

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Missile Defense Agency										Date: February 2018																			
Appropriation/Budget Activity 0400 / 4										R-1 Program Element (Number/Name) PE 0604887C / Ballistic Missile Defense Midcourse Defense Segment Test										Project (Number/Name) MT08 / Midcourse Test									
Significant Event Complete ▲		Significant Event Planned △		Milestone Decision Complete ★		Milestone Decision Planned ☆		Element Test Complete ◆		Element Test Planned ◇		System Level Test Complete ●		System Level Test Planned ○		Complete Activity ◆		Planned Activity ◇											
										FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023							
IMTP v19.1 flight and ground test event details are at a higher classification.										◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Missile Defense Agency			Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment Test</i>	Project (Number/Name) MT08 / <i>Midcourse Test</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
IMTP v19.1 flight and ground test event details are at a higher classification.	1	2017	4	2023

Note

Notes: CTV - Controlled Test Vehicle; GTI - Ground Test Integrated; GTD - Ground Test Distributed; GTX - Ground Test Exercise; GDEx - Global Defender Exercise; FTG - Flight Test Ground-Based Interceptor; FTO - Flight Test Operational; FTX - Flight Test Exercise; N/P - NORTHCOM/PACOM

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Missile Defense Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604887C / Ballistic Missile Defense Midcourse Defense Segment Test				Project (Number/Name) MD40 / Program Wide Support			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
MD40: Program Wide Support	2.798	3.031	3.304	3.623	-	3.623	3.347	3.742	3.931	3.918	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note												
Program Wide Support (PWS) reflects proportional changes as a result of budget changes to the Missile Defense Midcourse Defense Segment Test program element. Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests on the R-3.												
A. Mission Description and Budget Item Justification												
PWS contains non-headquarters management costs in support of MDA functions and activities across the entire BMDS. It Includes Government Civilians and Contract Support Services. This provides integrity and oversight of the BMDS as well as supports MDA in the development and evaluation of technologies that will respond to the changing threat. Additionally, PWS includes Global Deployment personnel and support performing deployment site preparation and activation, and provides facility capabilities for MDA Executing Agent locations. Other MDA wide costs includes: physical and technical security; civilian drug testing; audit readiness; the Science, Technology, Engineering, and Mathematics (STEM) program; legal services and settlements; travel and agency training; office, equipment, vehicle, and warehouse leases; utilities and base operations; data and unified communications support; supplies and maintenance; materiel and readiness and central property management of equipment; and similar operating expenses. PWS is allocated on a pro-rata basis and therefore, fluctuates by year based on the adjusted RDT&E profile (which excludes: 0305103C Cyber Security Initiative, 0603274C Special Programs, 0603913C Israeli Cooperative Program and 0901598C Management Headquarters).												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2017	FY 2018	FY 2019	
Title: Program Wide Support Articles: Description: N/A FY 2018 Plans: N/A FY 2019 Plans: N/A FY 2018 to FY 2019 Increase/Decrease Statement: N/A									3.031	3.304	3.623	
									-	-	-	
Accomplishments/Planned Programs Subtotals									3.031	3.304	3.623	

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Missile Defense Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment Test</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy N/A		
E. Performance Metrics N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Missile Defense Agency												Date: February 2018			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense Midcourse Defense Segment Test</i>						Project (Number/Name) MD40 / <i>Program Wide Support</i>			
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Wide Support - Agency Operations User Services	Reqn	Various : Multi: AL, CA, CO, VA	0.000	0.000		0.870	Aug 2018	1.987	Jun 2019	-		1.987	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Civilian Salaries, Travel, Training	Allot	Various : MDA Multi: AL, CO, CA	2.798	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Other Agency Services (MIPRs)	MIPR	Various : Multi: AL, VA	0.000	0.000		0.016	Aug 2018	0.016	Aug 2019	-		0.016	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services	C/CPFF	Various : Multi: AL, VA	0.000	3.031	Aug 2017	2.103	Aug 2018	0.661	Jul 2019	-		0.661	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support, International, and Materiel and Readiness (MIPRs)	MIPR	Naval Surface Warfare Center : VA, AL	0.000	0.000		0.249	Aug 2018	0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations Management	Allot	Various : Multi: AL, VA	0.000	0.000		0.066	Jun 2018	0.319	Jul 2019	-		0.319	Continuing	Continuing	Continuing
Program Wide Support - FFRDC/UARC	C/CPAF	Various : Multi: AL, VA	0.000	0.000		0.000		0.640	Aug 2019	-		0.640	Continuing	Continuing	Continuing
Subtotal			2.798	3.031		3.304		3.623		-		3.623	Continuing	Continuing	N/A
Remarks N/A															
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			2.798	3.031		3.304		3.623		-		3.623	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Missile Defense Agency							Date: February 2018			
Appropriation/Budget Activity 0400 / 4				R-1 Program Element (Number/Name) PE 0604887C / Ballistic Missile Defense Midcourse Defense Segment Test			Project (Number/Name) MD40 / Program Wide Support			
	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract	
Remarks N/A										

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Missile Defense Agency														Date: February 2018																				
Appropriation/Budget Activity 0400 / 4														R-1 Program Element (Number/Name) PE 0604887C / Ballistic Missile Defense Midcourse Defense Segment Test										Project (Number/Name) MD40 / Program Wide Support										
Significant Event Complete ▲				Milestone Decision Complete ★				Element Test Complete ◆				System Level Test Complete ●				Complete Activity ◆																		
Significant Event Planned △				Milestone Decision Planned ☆				Element Test Planned ◇				System Level Test Planned ○				Planned Activity ◇																		
														FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023								
MD40 Program-Wide Support														◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Missile Defense Agency			Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604887C / Ballistic Missile Defense Midcourse Defense Segment Test	Project (Number/Name) MD40 / Program Wide Support	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MD40 Program-Wide Support	1	2017	4	2023